

**ATTACHMENT 4**  
**INSPECTION PLAN**



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**1.0 Inspection Schedule: 264.15, 270.14(b)(5), R-450 8.2.6,  
3.3.2(a)(5)**

The safe and efficient operation of the Safety-Kleen Clive facility requires that all equipment and structures be maintained in proper working order. A schedule of inspections is used to ensure all equipment and structures are in working order and identify structures or equipment requiring maintenance.

Appendices A through D provide inspection schedules for the general facility, tank systems, container management units, and the incineration system. Inspection forms have been developed listing the specific items and areas observed during inspections and are used to identify potential and existing problems within the facility. These inspection forms, organized by frequency in Appendix E, include those items that must be inspected. The Permittee may change the format of the inspection forms without a permit modification, provided the content of the forms as found in Appendix E remains the same.

The inspection schedules in Appendices A through D indicate the frequency for each item on the schedule. Inspection frequency may range from daily to once every four years, depending upon the item of concern. The frequency has been based the rate of pos-

sible deterioration of equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error remained undetected between inspections. For example, areas within the facility subject to spills, such as truck loading and unloading areas will be inspected daily when in use.

The designated inspector will be responsible for performing the inspections. The record of the inspections and the schedule will be maintained at the facility. The results of the inspections will be recorded in an inspection log, i.e., completed inspection forms or inspection forms with work orders, both completed and outstanding, which are associated with the inspection forms. The inspection forms will include the date, the time of the inspection, the name of the inspector, his/her signature, a record of observations made, problems, and the nature and date of any repairs or any remedial actions. A completed work order may be attached to an inspection form instead of writing the nature and date of any repairs or any remedial actions on the inspection form. Problems identified in the inspection log will be corrected. If the problem identified is a threat to human health or the environment, then actions to correct the situation will be undertaken immediately. If the repairs are required, they will

be made as soon as they can be safely and practically performed. All steps necessary to allow the repairs to proceed without exposing the workers to hazardous materials, hazardous waste, or hazardous situation will be complete prior to beginning the repair work. A record of all repairs and necessary safety precautions will be made and will be a part of the facility operating record.

The inspector will communicate the occurrence of problems to the Resource Manager. The timing of this notification will depend on the seriousness of the problem. A problem threatening human health would be reported immediately (if necessary, the inspector will notify the Emergency Coordinator as required by the Contingency Plan, Attachment 7 of this permit). A burned-out light bulb would be reported during the same shift as the inspection. The Resource Manager will review the inspection log at the beginning of his/her shift to be aware of any problems discovered on the prior shift. The Resource Manager will arrange for repairs. Completion of repairs will be documented by entries on the inspection form or by attaching documentation to the inspection form, such as a completed work order.

**1.1 General Facility Inspection: 270.14(b)(5), 264.15(a) and (b), 264.33, R-450 3.3.2(a)(5), 8.2.6(a) and (b), 8.3.4**

The general inspection schedule includes inspection of monitoring equipment, safety and emergency equipment, security devices, and operating equipment and structures not specifically covered in other inspections. Appendix A provides the general facility inspection schedule. General facility inspection forms are included in Appendix E. These inspections insure that minimum conditions and levels of equipment/supplies are available. The facility may maintain more than the minimum required and not include them on the inspection schedules.

The inspection forms contain a place to document each item to be inspected.

**1.2 Container Inspection: 264.174, R-450 8.9.5**

The inspection schedule of containers and container management units at the facility are given in Appendix B. Container management unit inspection forms are included in Appendix E. At least weekly, container management areas will be inspected for leaking containers, the presence of liquids on drum tops, and deteriorating containers or containment systems caused by corrosion or other factors.

**1.3 Tank Inspection: 264.195, R-450 8.10**

The inspection schedule for Tanks and Tank Systems at the facility are given in Appendix C. Tank and tank system inspection forms are included in Appendix E. A list of the tanks and description of the tank systems is provided in Attachment 11 of this permit. Each of the tanks listed in Attachment 11 will be inspected for all of the items listed in the Inspection Schedule for Tank Systems. The inspections will include tanks, ancillary equipment, secondary containment systems, areas surrounding tank systems, tank overfilling control equipment, and alarms.

- The visible portions of the construction material of tanks will be inspected for evidence of corrosion, deterioration, or erosion which could result in a leaking or unfit for use tank or tank system.
- The area immediately surrounding all tank systems including areas within the secondary containment systems will be inspected each operating day for obvious signs of deterioration or releases of hazardous waste.

- Tank overfilling control and monitoring equipment will be inspected daily.
  
- The storage tanks in the Bulk Materials Building will be inspected daily to insure adequate freeboard is maintained. The leak detection systems for the tanks will be inspected each operating day for evidence of leakage. The tanks will be enclosed within a building providing protection from wind and precipitation. The solid or sludge material in the tanks will not be susceptible to wave action.

**1.3.1      Tank Condition Assessment:    264.195, R-450 8.10**

Tanks may occasionally be left empty between batches for the purpose of routine maintenance or internal tank inspection.

**1.4 Incineration System Inspection: 264.347(b), and (c) R-450  
8.15.8(b) and(c)**

The inspection schedule for the incineration system is provided in Appendix D. Incineration system inspection forms are included in Attachment E. Examples of the incineration system inspections include:

- Primary Kiln, Burner Kiln and Secondary Combustion Chamber: The kiln seals, and feed mechanisms will be inspected daily. The operability of the Waste Feed Cut-off System and associated alarms will be tested weekly in accordance with 264.347(c), unless the Permittee demonstrates to the Executive Secretary that weekly inspections will unduly upset operations and that less frequent inspections will both adequately protect human health and the environment and allow the Executive Secretary to oversee compliance with the permit. Less frequent operability testing of the Waste Feed Cut-off System and associated equipment must be approved by the Executive Secretary.

- Air Pollution Control System (APCS): The APCS will be inspected daily for evidence of fugitive emissions from the waste heat boiler, dry scrubber, baghouse, induced draft fan, and wet scrubber from seals, flanges and ducting. The ash storage tanks and ash accumulation building and associated feed conveyors will be visually inspected for evidence of leaks or spills.

The incinerator drawings are contained in Attachment 15.

## **APPENDIX A**

### **GENERAL FACILITY INSPECTION SCHEDULE**



## PERIMETER & GENERAL FACILITY

### MONTHLY:

- Inspect dock levelers, dock boards and wheel chocks for operability, mechanical condition, wear, integrity of safety systems, and cleanliness.
- Check forklifts for operability, fluid leaks, worn parts.
- Inspect excavators (backhoe or trackhoe) for operability, fluid leaks, worn parts.

### WEEKLY:

- Visually check fences for breaks or damage;
- Visually check warning signs for clear visibility;
- Visually check for erosion under fences;
- Visually check access and intra-facility roads for deterioration, erosion, or spills;
- Operate the gate to check for proper functioning;
- Visually check for vegetation growing around or above fences and warning signs.

### DAILY WHEN FACILITY IS IN OPERATION:

- Check truck sampling area for evidence of spills or leaks.
- Inspect run-off control devices such as roadway curbs and culverts for blockages and damage.
- Inspect the Intermodal Container Staging and Transfer (Unit 104) area for spills, leaks, and cracks in the concrete.
- Inspect the Rail to Trailer Transfer (Unit 255) area for spills, leaks, and cracks in the concrete.
- Inspect the Ash Accumulation Bldg. (Unit 254) and the APCS Ash Loadout Building (Unit 256) areas for spills, leaks, and cracks in the concrete.
- Inspect the WFTF Rail Tanker Unloading (Unit 535) area for spills, leaks, and cracks in the concrete.
- Inspect the WFTF Pumpable Sludge Unloading (Unit 536) area for spills, leaks, and cracks in the concrete.
- Inspect the Special Handling Bay (Unit 538) area for spills, leaks, and cracks in the concrete.
- Inspect the truck unloading/loading area for Aqueous Waste Storage (Unit 601) for spills, leaks, and cracks in the concrete.

- Inspect the truck unloading/loading area for WFTF Storage (Units 531 & 532) for spills, leaks, and cracks in the concrete.
- Inspect the truck unloading/loading area for Container Management (Units 101 & 102) for spills, leaks, and cracks in the concrete.
- Inspect the rail line within the Clive facility for obstructions, damaged rail, damaged ties, and evidence of leaks or spills.
- Inspect the switching stations associated with the rail line within the Clive for obstructions, damaged components, and proper operation.

## SAFETY AND EMERGENCY EQUIPMENT

### MONTHLY:

- Inspect tags of fire extinguishers for expiration dates and adequate pressure.
- Test telephones for proper operation.
- Test fire alarms for proper operation.
- Test paging and loudspeaker systems for proper operation.
- Check supplied air breathing system (SABS) and/or self-contained breathing apparatus (SCBA) for air pressure with a pressure gauge. Replace bottles as needed. Check regulators to verify that air passage is unobstructed. Visually check masks and hoses for serviceability.
- Check that aisle space is unobstructed to allow movement of personnel, or emergency response equipment. The minimum aisle width is two and one-half (2 1/2) feet.
- Inspect container storage area for absorbent.
- Inspect first aid stations for missing items. Posted in each first aid station will be an itemized list of

the minimum quantity and type of medical supplies to be located at the station.

- Check operability of fire water pump by operating it. Pressurize fire water delivery system to check for leaks and adequate pressure. The minimum pressure will be at least 100 pounds per square inch gauge.
- Inspect external condition of safety showers and operate to verify adequate water flow.
- Inspect external condition of eye wash stations and operate to verify adequate water flow.
- Inspect spill response equipment for correctness of inventory and operable condition. Spill response equipment includes the following:
  - Overpack drums. An overpack drum is a container large enough to hold a standard 55 gallon drum.
  - Absorbents. Absorbents may be dry powders or granular materials, textiles, or similar items which can reduce or stop the spread of spilled liquids and allow the spilled material to be recovered.

- Vacuum truck(s). There will be at least one (1) vacuum truck at the Clive facility that can be used to recover released materials.
- Portable pumps. A number of portable pumps will be available for removing liquids from sumps.
- Hand tools. Shovels, brooms, buckets, absorbent materials and detergent will be kept in the safety equipment storage area.
- Inspect decontamination equipment for correctness of inventory and operable condition. Decontamination equipment includes the following:
  - Shovel
  - Brooms
  - Detergent
  - Absorbent towels
- Inspect the safety equipment storage area. Check for the correct quantity and type of the following equipment per the inventory posted in the emergency equipment trailer:
  - Cartridge air masks

- Air mask cartridges
- Protective coveralls
- Waterproof safety boots
- Gloves
- Hand tools
- First aid supplies
- SCBAs
- Fire hoses and tools

WEEKLY:

- Visually check water level indicator at the fire water storage tank. The minimum level is twenty-two (22) feet.

DAILY:

- Visually inspect emergency equipment in Units 103, 251, 252, 531-534, 601, 602, and 604. Check location, contents, and condition of fire extinguishers (pressure and pin in place); safety shower/eyewash stations (valve lineup, eyewash caps, freeze protection, chain); telephones; decontamination kits; and absorbent kits.



APPENDIX B  
INSPECTION SCHEDULE FOR CONTAINERS,  
SHREDDER AND REPACKAGING UNIT



INSPECTION SCHEDULE FOR  
CONTAINERS

This schedule applies to the following areas at the Safety-Kleen Clive facility, except as noted:

- Container Management (Units 101 & 102)
- Thaw Unit (105)
- WFTF Rail Tanker Unloading (Unit 535)
- Special Handling Bay (Unit 538)
- Containerized Bulk Solids (Unit 106)
- Any area where containers without free liquids are being stored outside of secondary containment (Unit 101)

WEEKLY:

- Visually inspect containers for evidence of leaks, corrosion, or deterioration. Transfer the contents of deteriorated container to a container in good condition.
- Visually inspect containers for presence of legible markings.

- Check the container storage areas, concrete slab, and curbs for cracks, gaps, flaking, chips, gouges, and other signs of wear.
- Check the container storage area roofs (where applicable) for leaks, tears, and other signs of deterioration.
- Check the raised accessways in Container Management Unit (Unit 101) for obstructions (See Attachment 9 of this permit). Check all other aisles in container management areas for a minimum of two and one-half (2 1/2) feet of aisle space.
- Check sumps/secondary containment for presence of liquids.
- Check container management areas to ensure incompatible wastes are properly segregated by comparing the container storage records with the actual containers present at each storage area.
- Verify that absorbent kits are available at each area (except where containers without free liquids are being stored outside of secondary containment) for spill control.

- Inspect empty drums used in repackaging for damage and structural integrity. Remove drums from service which are unsuitable for use.

DAILY WHEN FACILITY IS IN OPERATION:

- Check containment system loading and unloading area for evidence of spills.
- Check containment system loading and unloading area for evidence of cracks in the concrete.
- Check containers for evidence of liquids on container tops. If liquids are found, the source of the liquids will be determined and the liquids cleaned up.

INSPECTION SCHEDULE FOR SHREDDER  
AND REPACKAGING UNIT

MONTHLY:

- Clean out the shredder using the procedure used between batches of incompatible wastes. Cycle the slide gates for both the feed chamber and the discharge chamber and observe their operation. Check for smooth movement, complete opening and closing, and for damage to the gate. Check the shredder knives for cracks, pits, and broken teeth. Inspect the breaker bar and plate for lodged material and for damage. Check the fire detectors and pressure sensors for masking and damage. Use a SCBA or SABS to enter the shredder area.
- Visually check for erosion and cracks around the shredder structure, foundations, and pads.
- Visually check for corrosion, discoloration, leaks, cracks, bulges, and buckles of support beams and plates of the shredder enclosure, feed chamber, and discharge chamber walls.
- Visually check for smooth operation of the drum lift mechanism and proper operation of the hydraulic system.

DAILY WHEN FACILITY IS IN OPERATION:

- Check external portion of shredder for corrosion and leaking.
- Visually check for corrosion, leaks, or distortion around nozzles and piping connected to the shredder.
- Inspect area around shredder for signs of leaking.
- Check floor around the shredder (concrete slab and curbs) for cracks, gaps, flaking, chips, gouges, and other signs of wear and leaking.
- Inspect fire monitoring equipment for proper status of supervisory circuits, i.e., for the power to be "on", and for the alarm and trouble indicators to be "off".
- Inspect nitrogen blanketing equipment for proper pressure readings, i.e., the nitrogen supply pressure should be at least two pounds per square inch gauge, and the nitrogen pressure within the shredder should be between one inch of water column and one pound per square inch gauge.
- Check shredder discharge areas for evidence of spills.



**APPENDIX C**  
**INSPECTION SCHEDULE FOR TANK SYSTEMS**  
**AND SOLIDS SHREDDERS**



## INSPECTION SCHEDULE FOR TANK SYSTEMS

EVERY FOUR YEARS:

The following procedures will be followed by the permittee when performing the internal visual inspections.

- ! The contents of the tanks will be transferred to another tank, tanker, container, or the incinerator according to the procedures described in the Waste Analysis Plan (WAP).
  
- ! To minimize the emissions of volatile organic compounds during inspection, the tanks that have been used to store and/or treat wastes that contain a significant amount of organic compounds will be purged with nitrogen before inspection. The tanks to be purged are listed below (i.e., these tanks will be used to store and/or treat organic type wastes):

General Descrip.	# of Tanks	Tank Number
Waste	3	TK001-003
Fuel	8	TK004-011
Tank Farm	4	TK012-015
A	3	TK016-018
Waste	3	001B-003B
Fuel	8	004B-011B
Tank Farm	4	012B-015B
B	3	016B-018B
Decant	1	TK025
Tanks	3	TK026-028
Aqueous Waste Tanks	1	TK-023

! The internal surfaces of the tanks will be cleaned (e.g., water, steam, etc.) as necessary. Except for the solids storage and energetic solids storage tanks (open top bins - TK031 - 033 and TK035 -038), the cleaning may be performed without tank entry. Any rinsate produced from the cleaning operation will be managed as a hazardous waste according to the procedures in the Waste Analysis Plan.

! Facility personnel will inspect the internal surfaces of the solids storage and energetic solids storage tanks (open top bins - TK031 - 033 and TK035 -038) for the following:

- ! Corrosion (pitting, discoloration, etc.)
- ! Loss of metal or coating (if applicable) thickness
- ! Cracks in steel plate or coating (if applicable)
- ! Cracks at nozzle connections and seams

The results of the internal inspection will be documented in the operating record.

- ! Facility personnel will inspect, without entry (e.g., via intrinsically safe video camera suspended through a nozzle or man way, etc.) or with entry, the internal surfaces of all other tanks (i.e., tanks that do not have an open top) for the following:

- ! Corrosion (pitting, discoloration, etc.)
- ! Loss of metal or coating (if applicable) thickness
- ! Cracks in steel plate or coating (if applicable)
- ! Cracks at nozzle connections and seams

The results of the remote internal inspection will be documented in the operating record. Video recorded cassettes of the inspections will be kept

at the Clive facility for a minimum period of three years.

- ! Areas that exhibit a loss of metal thickness will be ultrasonically tested as discussed previously in this plan. The results from the ultrasonic tests will be used to estimate the remaining tank life. If the estimated tank life reaches one year or less, then the permittee will retest at 90 day intervals. When testing indicates the remaining tank life is less than 90 days, the permittee will consider the tank unfit for continued use and follow the applicable conditions in sections IV.G, IV.J, and IV.K of module IV of this permit.

ANNUALLY:

- o Inspect the interior of the Solids Storage Tanks for evidence of cracks or leaks
- ! Perform ultrasonic testing using the following procedure:-

! For all of the tanks (see Table F-C.1), the surface of the tank will be permanently marked (e.g., circle of weld bead, etc.) so that each yearly reading will be taken at the same location on the tank surface. There will be a minimum of one mark (inspection point) for every 100 ft<sup>2</sup> of external surface area. The inspection points will be located on the tank surface in areas where the internal surface of the tank is typically in contact with waste. Each mark will be identified by a permanently affixed number (1-26). In the operating record, the tank number will then precede this number so that each inspection point has a unique number. For example, the inspection points for TK001 would be numbered TK001-1 through TK001-10 and the inspection points for TK002 would be numbered TK002-1 through TK002-10. Table F-C.1 provides the approximate external surface area and the minimum number of inspection points for each tank.

- ! For all above ground tanks (see Table F-C.1), there will be at least one inspection point on the bottom portion of the tank (i.e., dish, cone, etc.) and two inspection points on the sidewall.
  
- ! For all on ground tanks (see Table F-C.1), there will be at least two inspection points on the sidewall of each tank.

**Table F-C.1**  
**Inspection Points for Ultrasonic Testing**

General Description	Configuration (See Note 1 Below)	# of Tanks	Tank Number	Dimensions (Nominal)	Approximate External Surface Area (ft <sup>2</sup> ) (See Note 2 Below)	Minimum # of Inspection Points Per Tank
Waste Fuel Tank Farm A	A A O A	3 8 4 3	TK001-003 TK004-011 TK012-015 TK016-018	12'Dx20'H 12'Dx20'H 22'Dx18'H 12'Dx12'Hx9'C	1,000 1,000 1,630 770	10 10 17 8
Waste Fuel Tank Farm B	A A O A	3 8 4 3	001B-003B 004B-011B 012B-015B 016B-018B	12'Dx20'H 12'Dx20'H 22'Dx18'H 12'Dx12'Hx9'C	1,000 1,000 1,630 770	10 10 17 8
Decant Tanks	A A	1 3	TK025 TK026-028	6'Dx10'Hx5'C 6'Dx10'Hx5'C	270 270	3 3
Solids Storage Tanks	I	3	TK031-033	30'Lx20'Wx20'	2,000	20
Energetic Solid Tanks	I	4	TK035-038	15'Lx15'Wx15'	850	9
Aqueous Waste Tanks	O O	4 1	TK019-022 TK-023	12'Dx24'H 22'Dx18'H	1,020 1,630	11 17
Truck Washwater Tank	A	1	TK029	8'Dx8'Hx4'C	320	4
Note 1: I = Inground, O = On ground, A = Above ground						
Note 2: The surface areas presented for on ground tanks and the Solids Storage Tanks (TK-031 through 033) do not include the surface area of the bottom of the tanks.						

- ! For the solids storage tanks (TK-031 through 033), the inspection points will be located on the internal surface of the sidewall. For the energetic solids tanks (TK035-038) the inspection points will be located on the external surface of the bottom portion of the tanks and the internal surface of the sidewalls of the tanks.
  
- ! The ultrasonic measurements will be obtained by following the manufacturer's recommendations for instrument operation and calibration.
  
- ! The results of the ultrasonic testing will be documented in the operating record. The results from the ultrasonic tests will be used to estimate the remaining tank life (i.e., for each tank, the remaining corrosion allowance will be divided by the average corrosion rate). If the estimated tank life reaches one year or less, then the permittee will retest at 90 day intervals. When testing indicates the remaining tank life is less than 90 days, the permittee will consider the tank

unfit for continued use and follow the applicable conditions in sections IV.G, IV.J, and IV.K of module IV of this permit.

SEMI-ANNUALLY:

- Test the overfill control equipment for each tank (except the Solids and Energetic Solids Storage Tanks) listed in Attachment 9 of this permit. The following procedures will be followed to ensure proper operation of the overfill control equipment. The tanks (TK001 - 023, TK025 - 029) will be equipped with a level switch (sensor type) that is activated if the working capacity of the tank is reached. The fill system, controlled by the level switch, for each tank will be tested as follows:
  - Facility personnel will cycle the test switch located in the control panel to simulate an overfill condition.
  - Facility personnel will ensure, for the particular overfill equipment being tested, that an alarm condition is indicated and the inlet feed valve(s)

have closed and feed pump(s) have shut down. This will be accomplished by either viewing the status of valve(s) and pump(s) at a control console (located in the various control rooms) or by direct field observation. The results of this inspection will be recorded on an inspection sheet.

- If the system(s) do not perform in the manner described above, facility personnel will note on the appropriate inspection sheet that the equipment is malfunctioning. No additional waste will be placed into the affected tank until the equipment is repaired, retested, and demonstrated to be working correctly.
- Alternatively, the switch may be tested directly to demonstrate that the waste feed shutoff system operates properly.

DAILY WHEN FACILITY IS IN OPERATION:

- Check aboveground portion of tanks, pumps, piping and other parts of the tank systems for corrosion or releases of waste.

- Check data from pressure, temperature, level, and flow transmitters located on tanks (except the Solids and Energetic Solids Storage Tanks) to ensure that the tank systems are being operated according to their design. (Reference Table F-C.2)
- Visually check for the construction materials and the area immediately surrounding the externally accessible portion of the tank systems for erosion or evidence of releases of waste (e.g., wet spots, discolorations).
- Check tank containment system (concrete slab, sumps, and curbs ) for cracks, gaps, flaking, chips, gouges, wet areas, puddles, and other signs of weak and leaking
- Inspect all pressure, temperature, and level monitoring equipment on each tank listed in Attachment 9 of this permit (except the Solids and Energetic Solids Storage Tanks) for damage. Check that all readouts associated with each tank listed in Attachment 9 of this permit (except the Solids and Energetic Solids Storage Tanks) are operational. (Reference Table F-C.2)
- Check tank unloading and loading areas at the WFTF Storage (Units 531 & 532), the Aqueous Waste Storage (Unit 601) and the Truck Washwater Tank (Unit 604) for

evidence of spills. Check hoses for signs of wear or other damage. Check hose couplings for proper seals. Check hoses in use for signs of leaks from the hose itself, or from either coupling.

- Visually check for evidence of leakage in secondary containment area and from ancillary equipment without secondary containment.
- Check pumps for missing coupling guards, anchor bolts, flange bolts, and electrical junction box covers. Check seal lubricant level.
- Check pumps and piping for excessive vibration or noise.
- Visually check the Solids Storage Tanks and Energetic Solids Storage Tanks for adequate freeboard. The freeboard for the open tanks must average more than one foot.
- Check each tank's emission control equipment, i.e., check for proper valve alignment of tank venting systems and for carbon absorption unit break through.

**TABLE F-C.2**

TANK	MONITORING EQUIPMENT	READOUTS		NITROGEN BLANKETING SYSTEM	HEATERS
		LOCAL	REMOTE		
531-TK-001	531-LE-011 531-LSHH-012 531-PSHL-018 531-PCV-014 531-PSV-019	531-LIT-011	531-LI-011 531-LAL-011 531-LAH-011* 531-LAHH-011* 531-LAHH-012* 531-PAL-018 531-PAH-018	531-NC-081	N/A
531-TK-002	531-LE-025 531-LSHH-026 531-PSHL-032 531-PCV-028 531-PSV-033	531-LIT-025	531-LI-025 531-LAL-025 531-LAH-025* 531-LAHH-025* 531-LAHH-026* 531-PAL-032 531-PAH-032	531-NC-082	N/A
531-TK-003	531-LE-039 531-LSHH-040 531-PSHL-046 531-PCV-042 531-PSV-047	531-LIT-039	531-LI-039 531-LAL-039 531-LAH-039* 531-LAHH-039* 531-LAHH-040* 531-PAL-046 531-PAH-046	531-NC-083	N/A
532-TK-004	532-LE-010 532-LSHH-011 532-PSHL-013 532-PCV-012 532-PSV-014	532-LIT-010	532-LI-010 532-LAL-010 532-LAH-010* 532-LAHH-010* 532-LAHH-011* 532-PAL-013 532-PAH-013	532-NC-128	N/A
532-TK-005	532-LE-022 532-LSHH-023 532-PSHL-025 532-PCV-024 532-PSV-026	532-LIT-022	532-LI-022 532-LAL-022 532-LAH-022* 532-LAHH-022* 532-LAHH-023* 532-PAL-025 532-PAH-025	532-NC-129	N/A
532-TK-006	532-LE-033 532-LSHH-034 532-PSHL-036 532-PCV-035 532-PSV-037	532-LIT-033	532-LI-033 532-LAL-033 532-LAH-033* 532-LAHH-033* 532-LAHH-034* 532-PAL-036 532-PAH-036	532-NC-130	N/A
532-TK-007	532-LE-044 532-LSHH-045 532-PSHL-047 532-PCV-046 532-PSV-048	532-LIT-044	532-LI-044 532-LAL-044 532-LAH-044* 532-LAHH-044* 532-LAHH-045* 532-PAL-047 532-PAH-047	532-NC-131	N/A

**TABLE F-C.2**

TANK	MONITORING EQUIPMENT	READOUTS		NITROGEN BLANKETING SYSTEM	HEATERS
		LOCAL	REMOTE		
532-TK-008	532-LE-064 532-LSHH-065 532-PSHL-067 532-PCV-066 532-PSV-068	532-LIT-064	532-LI-064 532-LAL-064 532-LAH-064* 532-LAHH-064* 532-LAHH-065* 532-PAL-067 532-PAH-067	532-NC-132	N/A
532-TK-009	532-LE-076 532-LSHH-077 532-PSHL-079 532-PCV-078 532-PSV-080	532-LIT-076	532-LI-076 532-LAL-076 532-LAH-076* 532-LAHH-076* 532-LAHH-077* 532-PAL-079 532-PAH-079	532-NC-133	N/A
532-TK-010	532-LE-087 532-LSHH-088 532-PSHL-090 532-PCV-089 532-PSV-091	532-LIT-087	532-LI-087 532-LAL-087 532-LAH-087* 532-LAHH-087* 532-LAHH-088* 532-PAL-090 532-PAH-090	532-NC-134	N/A
532-TK-011	532-LE-106 532-LSHH-107 532-PSHL-109 532-PCV-108 532-PSV-110	532-LIT-106	532-LI-106 532-LAL-106 532-LAH-106* 532-LAHH-106* 532-LAHH-107* 532-PAL-109 532-PAH-109	532-NC-135	N/A
533-TK-012	533-LE-001 533-LSHH-002 533-PSHL-004 533-PCV-003 533-PSV-005	533-LIT-001	533-LI-001 533-LAL-001 533-LAH-001* 533-LAHH-001* 533-LAHH-002* 533-PAL-004 533-PAH-004	533-NC-061	N/A
533-TK-013	533-LE-013 533-LSHH-014 533-PSHL-016 533-PCV-015 533-PSV-017	533-LIT-013	533-LI-013 533-LAL-013 533-LAH-013* 533-LAHH-013* 533-LAHH-014* 533-PAL-016 533-PAH-016	533-NC-062	N/A
533-TK-014	533-LE-027 533-LSHH-028 533-PSHL-030 533-PCV-029 533-PSV-031	533-LIT-027	533-LI-027 533-LAL-027 533-LAH-027* 533-LAHH-27* 533-LAHH-028* 533-PAL-030 533-PAH-030	533-NC-063	N/A

**TABLE F-C.2**

TANK	MONITORING EQUIPMENT	READOUTS		NITROGEN BLANKETING SYSTEM	HEATERS
		LOCAL	REMOTE		
533-TK-015	533-LE-039 533-LSHH-040 533-PSHL-042 533-PCV-041 533-PSV-043	533-LIT-039	533-LI-039 533-LAL-039 533-LAH-039* 533-LAHH-039* 533-LAHH-040* 533-PAL-042 533-PAH-042	533-NC-064	N/A
534-TK-016	534-LE-013 534-LSHH-014 534-PSHL-016 534-PCV-032 534-PSV-036	534-LIT-013	534-LI-013 534-LAL-013 534-LAH-013* 534-LAHH-013* 534-LAHH-014* 534-PAL-016 534-PAH-016	534-NC-71	N/A
534-TK-017	534-LE-018 534-LSHH-019 534-PSHL-021 534-PCV-037 534-PSV-041	534-LIT-018	534-LI-018 534-LAL-018 534-LAH-018* 534-LAHH-018* 534-LAHH-019* 534-PAL-021 534-PAH-021	534-NC-72	N/A
534-TK-018	534-LE-024 534-LSHH-025 534-PSHL-011 534-PCV-042 534-PSV-046 534-TE-049 534-TV-049 534-TT-049	534-LIT-024	534-LI-024 534-LAL-024 534-LAH-024* 534-LAHH-024* 534-LAHH-025* 534-PAL-011 534-PAH-011 534-TAH-049 534-TIC-049	534-NC-73	N/A
601-TK-019	601-LE-011 601-LSHH-012 601-TSHL-048	601-LIT-011 601-TI-079	601-LI-011 601-LAL-011 601-LAH-011* 601-LAHH-011* 601-LAHH-012* 601-TAL-048 601-TAH-048	N/A	601-HX-001
601-TK-020	601-LE-017 601-LSHH-018 601-TSHL-049	601-LIT-017 601-TI-060	601-LI-017 601-LAL-017 601-LAH-017* 601-LAHH-017* 601-LAHH-018* 601-TAL-049 601-TAH-049	N/A	601-HX-002
601-TK-021	601-LE-024 601-LSHH-025 601-TSHL-046	601-LIT-024 601-TI-061	601-LI-024 601-LAL-024 601-LAH-024* 601-LAHH-024* 601-LAHH-025* 601-TAL-046 601-TAH-046	N/A	601-HX-003

**TABLE F-C.2**

TANK	MONITORING EQUIPMENT	READOUTS		NITROGEN BLANKETING SYSTEM	HEATERS
		LOCAL	REMOTE		
601-TK-022	601-LE-030 601-LSHH-031 601-TSHL-047	601-LIT-030 601-TI-082	601-LI-030 601-LAL-030 601-LAH-030* 601-LAHH-030* 601-LAHH-031* 601-TAL-047 601-TAH-047	N/A	601-HX-004
602-TK-023	602-LE-007 602-LSHH-008 602-TSHL-017 602-PSV-012	602-LIT-007 602-TI-025	602-LI-007 602-LAL-007 602-LAH-007* 602-LAHH-007* 602-LAHH-008* 602-TAL-017 602-TAH-017	602-NC-030	602-HX-001 602-HX-002 602-HX-003
103-TK-025	103-LE-009 103-LSHH-010 103-PSHL-012 103-PCV-038 103-PSV-042	103-LIT-009 103-LIH-009	103-LI-009 103-LAL-009 103-LAH-009* 103-LAHH-009* 103-LAHH-010* 103-PAL-012 103-PAH-012	103-NC-073	N/A
103-TK-026	103-LE-020 103-LSHH-021 103-PSHL-023 103-PCV-043 103-PSV-047	103-LIT-020 103-LIH-020	103-LI-020 103-LAL-020 103-LAH-020* 103-LAHH-020* 103-LAHH-021* 103-PAL-023 103-PAH-023	103-NC-074	N/A
103-TK-027	103-LE-026 103-LSHH-027 103-PSHL-029 103-PCV-046 103-PSV-052	103-LIT-026 103-LIH-026	103-LI-026 103-LAL-026 103-LAH-026* 103-LAHH-026* 103-LAHH-027* 103-PAL-029 103-PAH-029	103-NC-075	N/A
103-TK-028	103-LE-031 103-LSHH-032 103-PSHL-034 103-PCV-053 103-PSV-057	103-LIT-031 103-LIH-031	103-LI-031 103-LAL-031 103-LAH-031* 103-LAHH-031* 103-LAHH-032* 103-PAL-034 103-PAH-034	103-NC-076	N/A
604-TK-029	604-LE-011 604-LSHH-010 604-LSH-011	604-LIT-011 604-LAHH-010* 604-LAH-011*	N/A	N/A	N/A
NOTE 1: For Tanks 001-018, tank farm B will duplicate the above numbers followed by a B (i.e 532-lahh-107B).					
NOTE 2: * Indicates the high level alarms.					

TABLE F-C.2					
TANK	MONITORING EQUIPMENT	READOUTS		NITROGEN BLANKETING SYSTEM	HEATERS
		LOCAL	REMOTE		
NOTE 3: The following legend defines the lettering of the equipment listed above:					
LE - Level Element, LSHH - Level Switch High High, LIT - Level Indicating Transmitter, LI - Level Indicator, LAL- Level Alarm Low, LAH - Level Alarm High, LAHH - Level Alarm High High, PSHL - Pressure Switch High Low, PAL - Pressure Alarm Low, PAH - Pressure Alarm High, TI - Temperature Indicator, TSHL - Temperature Switch High Low, TAL - Temperature Alarm Low, TAH - Temperature Alarm High, PSV - Pressure Safety Valve, PCV - Pressure Control Valve.					

## INSPECTION SCHEDULE FOR NON-ENERGETIC SOLIDS SHREDDER

### MONTHLY:

- Run the shredder until empty, stop the shredder and lock out the controls. Use a SCBA, SABS or appropriate respirator to enter the shredder area. Check the shredder knives for cracks, pits, and broken teeth.
- Visually check for erosion and cracks around the shredder structure, foundations, and pads.
- Visually check for corrosion, discoloration, leaks, cracks, bulges, and buckles of support beams and plates of the shredder enclosure, feed chamber, and discharge chamber walls.
- Visually check for smooth operation of the clam shell mechanism and proper operation of the overhead crane system.

### DAILY WHEN FACILITY IS IN OPERATION:

- Check external portion of shredder for corrosion and damage.
- Visually check for corrosion, leaks, or distortion around chutes connected to the shredder.

- Inspect area around shredder for signs of spilled material.

## INSPECTION SCHEDULE FOR ENERGETIC SOLIDS SHREDDER

### MONTHLY:

- Run the shredder until empty, stop the shredder and lock out the controls. Use a SCBA, SABS or to enter the shredder area. Check the shredder knives for cracks, pits, and broken teeth.
- Visually check for erosion and cracks around the shredder structure, foundations, and pads.
- Visually check for corrosion, discoloration, leaks, cracks, bulges, and buckles of support beams and plates of the shredder enclosure, feed chamber, and discharge chamber walls.
- Visually check for smooth operation of the clam shell mechanism and proper operation of the overhead crane system.

### DAILY WHEN FACILITY IS IN OPERATION:

- Check external portion of shredder for corrosion and damage.
- Visually check for corrosion, leaks, or distortion around chutes connected to the shredder.

- Inspect area around shredder for signs of spilled material.



**APPENDIX D**  
**INSPECTION SCHEDULE FOR INCINERATION SYSTEM**  
**AND ASSOCIATED EQUIPMENT**



INSPECTION SCHEDULE FOR  
INCINERATION SYSTEM AND ASSOCIATED FEED EQUIPMENT

SEMI-ANNUALLY:

- Test all process control and monitoring instruments for accuracy, repeatability, and drift. Use the required EPA procedures for continuous emissions monitors and the manufacturer's procedures for other instruments. Recalibrate instruments to required standards or manufacturer's specifications as applicable.

MONTHLY:

- Check stand-by generator.

WEEKLY:

- Check for removal of spill absorbent and clean up materials.
- Check sumps, gratings, floors, and curbs for cracks and damage.
- Check secondary containment for gaps or cracks.
- Test the waste feed cut-off system for the incinerator at least within 168 operating hours of the last test by

activating the automatic test sequence, conducting an actual AWFCO and recording the results (see Appendix E for the inspection form to use).

All safety shut-off valves will be Factory Mutual (FM) approved valves. These valves are tested by actual operation every time a new batch of waste is fed to the incinerator.

DAILY WHEN FACILITY IS IN OPERATION:

- Check for evidence of spills in loading and unloading areas.
- Check kiln drive assembly and monitoring devices.
- Check compressor pressure gauges oil level and temperature.
- Check calibration of CEM's.
- Thoroughly visually inspect the incinerator and associated equipment (including pumps, valves, piping, conveyors, feed systems, etc.) for leaks, spills, fugitive emissions, deterioration, excessive wear, and signs of tampering.

- o Thoroughly visually inspect the recorded data specified in Module IX(A).F.3. of the Permit for completeness and for deviations from the operational conditions specified in Module IX(A).F.3 of the Permit.

**APPENDIX E**  
**INSPECTION FORMS**



Unit #	Description	Inspection Frequency	Inspection Form Used	Revision Date
Unit 033	Incineration System, APCS, and Associated Feed Equipment Inspection Record	Daily	0ID1	02/23/96
Unit 101	Container and Area Inspection Record	Daily	1RD1	12/04/95
Unit 105	Container and Area Inspection Record	Daily	1RD2	12/04/95
Unit 106	Container and Area Inspection Record	Daily	1RD3	04/02/97
Unit 102	Container and Area Inspection Record	Daily	1SD1	11/30/95
Unit 102	Shredding and Repackaging Inspection Record	Daily	1SD2	11/30/95
Unit 103	Tank, Area and Emergency Equipment Inspection Record	Daily	1SD3	12/04/95
Unit 251	Tank, Shredder, Area and Emergency Equipment Record	Daily	2SD1	11/30/95
Unit 252	Tank, Shredder, Area and Emergency Equipment Record	Daily	2SD2	11/30/95
Unit 538	Container Storage and Processing Area Inspection Log	Daily	5SD1	12/04/95
Units 531, 532, 533, 534	Tank Inspection Record	Daily	5SD2	12/04/95
Units 531-534, 531/532 Tanker Unloading Area Unloading Area and Emergency Equipment/Units 536 Tanker Unloading Area and 535 Tanker Transfer and Storage Area		Daily	5SD3	12/01/98
Units 103, 531, 532, 533, 534, 601, & 602	Tank Systems Monitor Inspection Record	Daily	5SD4	12/01/98
Unit 604	Tank Systems Monitor Inspection Record	Daily	5SD4_604	12/01/98
Unit 604	Truck Wash Tank Farm/Unload Areas and Emergency Equipment Inspection Record	Daily	6RD1	12/04/95
Units 601 & 602	Tank Inspection Record	Daily	6SD1	12/01/95
Units 601 & 602	Waste Aqueous Tank Farm, Unloading Area and Emergency Equipment Inspection Record	Daily	6SD2	12/04/95
CEM Audit Form/CEM Inspection Record-System 1		Daily	9ED1	05/28/96

Unit #	Description	Inspection Frequency	Inspection Form Used	Revision Date
	CEM Audit Form/CEM Inspection Record-System 2	Daily	9ED2	05/28/96
	Incineration System, APCS, and Associated Feed Equipment Inspection Record	Daily	9ID1	12/04/95
	Primary, Burner Kiln, SCC and APCS Controls and Monitor Inspection Record	Daily	9ID2	12/04/95
	Incineration System, APCS, and Associated Feed Equipment Inspection Record	Daily	9SD1	12/04/95
	Perimeter and General Facility Inspection Record - Receiving Areas	Daily	ARD1	12/04/95
	Unit 101 - Container and Area Inspection Record	Weekly	1RW1	12/04/95
	Unit 105 - Container and Area Inspection Record	Weekly	1RW2	12/04/95
	Unit 106 - Container and Area Inspection Record	Weekly	1RW3	04/01/96
	Incineration System, CEM Inspection Record - System 1 & 2	Weekly	9EW1	05/23/96
	Incineration System, APCS, and Associated Feed Equipment Inspection Record	Weekly	9IW1	12/01/95
	Incineration System, AWFCO Test Record	Every 168 Op. hours	9IW2	09/11/96
	Perimeter and General Facility Security, Safety and Emergency Equipment Inspection Record	Weekly	AXW1	12/01/95
	Unit 034 - Safety and Emergency Equipment Inspection Record	Monthly	0IM1	12/08/95
	Unit 033 - Safety and Emergency Equipment Inspection Record	Monthly	0IM2	02/23/96
	Unit 052 (Laboratory Area) - Safety and Emergency Equipment Inspection Record	Monthly	0LM1	04/09/96
	Unit 061 - Safety and Emergency Equipment Inspection Record	Monthly	0MM1	12/07/95
	Unit 053 - Safety and Emergency Equipment Inspection Record	Monthly	0RM1	12/08/95
	Unit 071/537 - Safety and Emergency Equipment Inspection Record	Monthly	0SM2	04/02/97

Unit #	Description	Inspection Frequency	Inspection Form Used	Revision Date
Unit 051/054	Safety and Emergency Equipment Inspection Record	Monthly	0XM1	12/07/95
Unit 052	(Administration) - Safety and Emergency Equipment Inspection Record	Monthly	0XM2	12/12/95
Unit 101	Safety and Emergency Equipment Inspection Record	Monthly	1RM1	04/02/97
Unit 105	Safety and Emergency Equipment Inspection Record	Monthly	1RM2	04/02/97
Unit 106	Safety and Emergency Equipment Inspection Record	Monthly	1RM3	04/02/97
Unit 104	Safety and Emergency Equipment Inspection Record	Monthly	1RM4	12/08/95
Unit 102	Safety and Emergency Equipment Inspection Record	Monthly	1SM1	04/02/97
Unit 102	Shredding and Repackaging Inspection Report	Monthly	1SM2	04/17/96
Unit 103	Safety and Emergency Equipment Inspection Record	Monthly	1SM3	04/02/97
Unit 255/055	Safety and Emergency Equipment Inspection Record	Monthly	2RM1	12/08/95
Unit 251	Safety and Emergency Equipment Inspection Record	Monthly	2SM1	04/02/97
Unit 251	Tank Inspection Record	Monthly	2SM2	12/08/95
Unit 251	Shredder Inspection Record	Monthly	2SM3	12/08/95
Unit 252	Safety and Emergency Equipment Inspection Record	Monthly	2SM4	04/02/97
Unit 252	Tank Inspection Record	Monthly	2SM5	12/08/95
Unit 252	Shredder Inspection Record	Monthly	2SM6	12/08/95
Unit 254	Safety and Emergency Equipment Inspection Record	Monthly	2SM7	04/02/97

Unit #	Description	Inspection Frequency	Inspection Form Used	Revision Date
Unit 256 -	Safety and Emergency Equipment Inspection Record	Monthly	2SM8	04/02/97
Units 531, 532, 533, 534 -	Safety and Emergency Equipment Inspection Record	Monthly	5SM1	04/02/97
Unit 535 -	Safety and Emergency Equipment Inspection Record	Monthly	5SM2	04/02/97
Unit 536 -	Safety and Emergency Equipment Inspection Record	Monthly	5SM3	04/02/97
Unit 538 -	Safety and Emergency Equipment Inspection Record	Monthly	5SM4	04/02/97
Unit 604 -	Safety and Emergency Equipment Inspection Record	Monthly	6RM1	04/02/97
Unit 601/602 -	Safety and Emergency Equipment Inspection Record	Monthly	6SM1	04/02/97
Incineration System Continuous Emission Monitors	Inspection Record - System 1	Monthly	9EM1	05/28/96
Incineration System Continuous Emission Monitors	Inspection Record - System 2	Monthly	9EM2	05/28/96
Unit 991 -	Safety and Emergency Equipment Inspection Record	Monthly	9IM1	12/08/95
Unit 992 -	Safety and Emergency Equipment Inspection Record	Monthly	9IM2	12/08/95
Unit 993 -	Safety and Emergency Equipment Inspection Record	Monthly	9IM3	12/08/95
Unit 994/996 -	Safety and Emergency Equipment Inspection Record	Monthly	9IM4	12/08/95
Unit 997/998 -	Safety and Emergency Equipment Inspection Record	Monthly	9IM5	12/12/95
Incineration System and Associated Feed Equipment	Inspection Record	Monthly	9IM6	12/12/95
Perimeter and General Facility	Inspection Record	Monthly	AMM1	05/09/96
General Facility -	Safety and Emergency Equipment Inspection Record	Monthly	AMM2	12/12/95

Unit #	Description	Inspection Frequency	Inspection Form Used	Revision Date
	First Aid Equipment - Safety and Emergency Equipment Inspection Log	Monthly	AXM1	12/01/95
	General Facility - Safety and Emergency Equipment Inspection Record	Monthly	AXM2	12/12/95
	Incineration System Continuous Emission Monitors Inspection Record - System 1	Quarterly	9EQ1	05/28/96
	Incineration System Continuous Emission Monitors Inspection Record - System 2	Quarterly	9EQ2	05/28/96
	Unit 103 - Tank AWFCO Inspection Record	Semi-Annually	1ES1	01/08/96
	Units 531, 532, 533, 534 - Tank AWFCO Inspection Record	Semi-Annually	5ES1	12/01/95
	Units 601, 602 - Tank AWFCO Inspection Record	Semi-Annually	6ES1	12/01/98
	Unit 604 - Tank AWFCO Inspection Record	Semi-Annually	6ES1_604	12/01/98
	Primary Kiln Controls and Monitors Instrument Calibration Record	Semi-Annually	9ES1	04/01/96
	Burner Kiln Controls and Monitors Instrument Calibration Record	Semi-Annually	9ES2	04/01/96
	SCC Controls and Monitors Instrument Calibration Record	Semi-Annually	9ES3	12/01/95
	APCS Controls and Monitors Instrument Calibration Record	Semi-Annually	9ES4	04/18/96
	Incineration System Continuous Emission Monitors Inspection Record - System 1	Semi-Annually	9ES5	05/23/96
	Incineration System Continuous Emission Monitors Inspection Record - System 2	Semi-Annually	9ES6	05/23/96
	Unit 103 - Tank Ultrasonic Thickness Inspection Record	Annually	1MA1	12/01/95
	Unit 251 - Tank Inspection and Ultrasonic Thickness Inspection Record	Annually	2MA1	12/01/95
	Unit 252 - Tank Inspection and Ultrasonic Thickness Inspection Record	Annually	2MA2	12/01/95

Unit #	Description	Inspection Frequency	Inspection Form Used	Revision Date
Unit 531	Tank Ultrasonic Thickness Inspection Record	Annually	5MA1	12/01/95
Unit 532	Tank Ultrasonic Thickness Inspection Record	Annually	5MA2	12/01/95
Unit 533	Tank Ultrasonic Thickness Inspection Record	Annually	5MA3	12/01/95
Unit 534	Tank Ultrasonic Thickness Inspection Record	Annually	5MA4	12/01/95
Unit 601	Tank Ultrasonic Thickness Inspection Record	Annually	6MA1	12/01/95
Unit 602	Tank Ultrasonic Thickness Inspection Record	Annually	6MA2	12/01/98
Unit 604	Tank Ultrasonic Thickness Inspection Record	Annually	6AM2_604	12/01/98
	Incineration System Continuous Emission Monitors Inspection Record - System 1	Annually	9EA1	05/28/96
	Incineration System Continuous Emission Monitors Inspection Record - System 2	Annually	9EA2	05/28/96
Unit 103	Tank Visual and Hydrostatic Test Inspection Record	Every Four Years	1M41	04/01/96
Unit 251/252	Tank Visual and Hydrostatic Test Inspection Record	Every Four Years	2M41	04/01/96
Unit 531, 532, 533, 534	Tank Visual and Hydrostatic Test Inspection Record	Every Four Years	5M41	04/01/96
Unit 601, 602	Tank Visual and Hydrostatic Test Inspection Record	Every Four Years	6M41	12/01/98
Unit 604	Tank Visual and Hydrostatic Test Inspection Record	Every Four Years	6M41_604	12/01/98